

(19)



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(11)

EP 0 723 303 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
28.05.1997 Bulletin 1997/22

(51) Int Cl. 6: H01L 33/00, H01S 3/19

(43) Date of publication A2:
24.07.1996 Bulletin 1996/30

(21) Application number: 96300297.7

(22) Date of filing: 16.01.1996

(84) Designated Contracting States:
DE FR GB

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(30) Priority: 17.01.1995 JP 23452/95

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(54) Semiconductor light-emitting device and method for manufacture thereof

(57) A device with a low resistance zone having confinement, superior reproducibility, and a very high yield comprises a plurality of semiconductor layers, wherein layer resistivity is changed by annealing. The semiconductor layers include a low resistance zone (44) having a high activation coefficient of acceptor impurities and

a high resistance region (45) having a low activation coefficient of acceptor impurities. The activation coefficient is controlled by irradiation with laser light. In addition, laser light is irradiated and absorbed into the semiconductor layers in one part of, or the entire, semiconductor layers, such that layer resistivity in the irradiated regions is changed by annealing resulting from such irradiation.

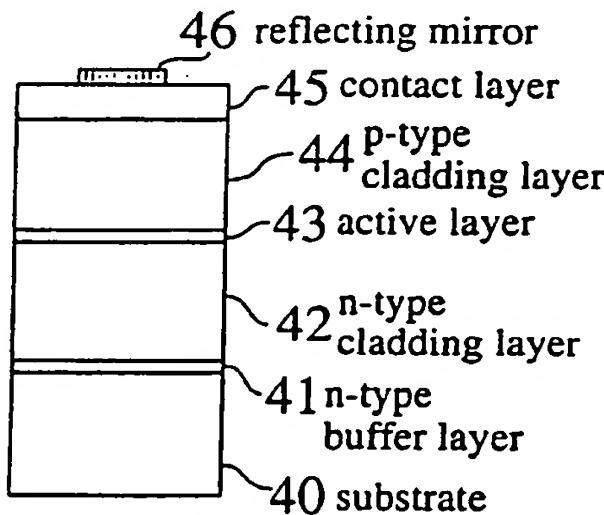


Fig. 6(A)

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EUROPEAN SEARCH REPORT

Application Number
EP 96 30 0297

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
A	EP 0 541 373 A (NICHIA KAGAKU KOGYO KK) 12 May 1993 * column 9, line 13 - column 11, line 57 * ---	1-3,9	H01L33/00 H01S3/19
A	PATENT ABSTRACTS OF JAPAN vol. 009, no. 208 (E-338), 24 August 1985 & JP 60 072287 A (MATSUSHITA DENKI SANGYO KK), 24 April 1985, * abstract *	1-3,5-16	
A	PATENT ABSTRACTS OF JAPAN vol. 005, no. 044 (E-050), 24 March 1981 & JP 55 166975 A (FUJITSU LTD), 26 December 1980, * abstract *	1-3,5-16	
A	SOVIET TECHNICAL PHYSICS LETTERS, AUG. 1987, USA, vol. 13, no. 8, ISSN 0360-120X, pages 380-382, XP002028613 GLADUSHCHAK V I ET AL: "Low-threshold heterostructure injection lasers with electrical confinement, produced by a pulsed laser technique" ---	1-3,5-16	TECHNICAL FIELDS SEARCHED (Int.Cl.6)
A	WO 85 02495 A (AMERICAN TELEPHONE & TELEGRAPH) 6 June 1985 -----	1,2,9	H01L H01S
The present search report has been drawn up for all claims			
Place of search	Date of completion of the search	Examiner	
THE HAGUE	3 April 1997	De Laere, A	
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document	T : theory or principle underlying the invention E : earlier patent document, not published on, or after the filing date D : document cited in the application L : document cited for other reasons A : member of the same patent family, corresponding document		